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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,811	10/23/2003	Jean-Pierre Dath	F-716DIV (31223/00014)	6352
25264	7590	12/23/2005	EXAMINER	
FINA TECHNOLOGY INC PO BOX 674412 HOUSTON, TX 77267-4412			JOHNSON, CHRISTINA ANN	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/691,811

Applicant(s)

DATH ET AL.

Examiner

Christina Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-21 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-21 and 23-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/206,210.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19-21 and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/04871 in view of Apelian et al.

WO 97/04871 discloses a process for treating a zeolite to improve its butene selectivity in catalytic cracking (page 1, lines 1-5). Suitable zeolites include ZSM-5 (page 3, lines 15-20). It is taught that the starting zeolite preferably have a silica to alumina molar ratio of less than about 200:1 (page 3, lines 30-35). The treatment includes a steam treatment followed by acid treatment (page 3, lines 30-35). The steam treatment is conducted at elevated temperatures in the range of 425-870 degrees C and at a water partial pressure of 13-200 kPa (page 4, lines 1-10). The steaming is carried out for a period in the range of from 0.5-12 hours (page 4, lines 5-10). Following steaming the zeolite is contacted with an acidic solution, including solutions of organic acids such as formic acid, oxalic acid, trichloroacetic acid, and trifluoroacetic acid (page 4, lines 10-20). The zeolite may be formulated with a binder material (page 5).

The reference does not disclose the silica to alumina molar ratio of the treated zeolite. However, the reference teaches that the treatment removes alumina from the zeolite framework (page 9, lines 40-45). It is the position of the examiner that because

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the reference details the use of the same steaming/acid treatment under the same conditions as the instant claims, the extent of dealumination would necessarily be the same.

The difference between the reference and the claims is that the reference does not disclose that the zeolite is combined with a binder prior to the steaming step.

Apelian et al. (US 5,242,676) discloses a process for producing a dealuminated zeolite, including dealuminated ZSM-5. The reference teaches that the zeolite may be combined with a binder prior to or following dealumination (column 8, lines 35-63).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method taught by the WO reference in light of the teachings of Apelian et al. Apelian et al. teaches that combining the zeolite with a binder may occur prior to or after the dealumination steps, suggesting that either alternative are equivalent. Therefore, it would have been obvious to one of ordinary skill to choose any equivalent method of combining the zeolite with a binder, with a reasonable expectation of success from the combination.

### ***Response to Arguments***

3. Applicant's arguments filed October 11, 2005 have been fully considered but they are not persuasive.

Applicant argues that the only motivation to combine the references comes from impermissible hindsight. This argument has been considered but is not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is

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based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the primary reference teaches all of the particulars of applicant's claimed invention except for the sequence of combining the molecular sieve with the binder. The secondary reference teaches that a molecular sieve may be combined with a binder material prior to or after dealumination. Therefore, it would have been obvious to one of ordinary skill to choose any equivalent method of combining the zeolite with a binder, with a reasonable expectation of success from the combination. The motivation to combine the references comes solely from the prior art and therefore there is no impermissible hindsight.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

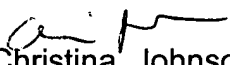
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Johnson whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Christina Johnson  
Primary Examiner  
Art Unit 1725

12/20/05

CAJ  
December 20, 2005